CLAIMS

1. A heat exchange laminate comprising a formable carrier layer at least partially covered with a flexible liquid retaining layer having an open structure such that in use, a heat exchange medium can directly contact the carrier layer through the open structure of the liquid retaining layer.
2. The heat exchange laminate according to claim 1, wherein the liquid retaining layer is a fibrous material and the open structure comprises spaces between the fibres.
3. The heat exchange laminate according to claim 2, wherein the fibrous material is adhered to the carrier layer by an adhesive.
4. The heat exchange laminate according to claim 3, wherein the fibrous material comprises a bonded mixture of polyester and viscose fibres.
5. The heat exchange laminate according to claim 3, wherein the fibrous material comprises a woven or knitted fibrous layer.
6. The heat exchange laminate according to any preceding claim wherein the carrier layer comprises aluminium.
7. The heat exchange laminate according to any preceding claim wherein the liquid retaining layer has an average thickness of less than 50 microns.
8. A heat exchange element comprising a formed heat exchange laminate according to any of claims 1 to 7.
9. The heat exchange element according to claim 8, wherein the heat exchange laminate is corrugated to form a series of elongate fins.
10. The heat exchange element according to claim 9 wherein the elongate fins are wave shaped in their elongate direction.
11. The heat exchange element according to claim 9 or 10, wherein the fins are provided with louvres.

12. The heat exchange element according to any of claims 8 to 11, wherein the liquid retaining layer is provided substantially only on a first side of the carrier layer.

13. The heat exchange element according to any of claims 8 to 12, further comprising a membrane, the formed heat exchange laminate being attached to the membrane.

14. The heat exchange element according to claim 13 wherein the formed heat exchange laminate is attached to the membrane by adhesive.

15. The heat exchange element according to claim 14 wherein the adhesive is a heat actuated adhesive applied to the carrier layer or the membrane.

16. The heat exchange element according to any of claims 13 to 15 wherein the membrane is formed into a tubular structure.

17. The heat exchange element according to any of claims 13 to 16, wherein the membrane also comprises a heat exchange laminate according to any of claims 1 to 7

18. The heat exchange element according to any of claims 8 to 12 wherein the heat exchange laminate is formed into a tubular structure.

19. A dew-point cooler comprising a heat exchange element according to any of claims 8 to 18.

20. A dew-point cooler according to claim 19, the dew-point cooler operating in counter flow wherein a product air stream flows over a first side of the heat exchange element and is cooled by heat transfer to the element and wherein a portion of the product air stream is diverted back over a second side of the heat exchange element, the second side of the heat exchange element being provided with a supply of water whereby heat transfer from the heat exchange element to the water causes it to evaporate into the air stream.

21. A method of manufacturing a heat exchange element comprising:

providing a heat exchange laminate comprising a formable carrier layer at least partially covered with a flexible liquid retaining layer having an open structure;

forming the laminate into a heat exchange element.

22. The method according to claim 21, wherein the laminate is formed into a plurality of elongate fins.

23. The method according to claim 22 further comprising forming louvres in the fins.

24. The method according to claim 22 or claim 23 further comprising attaching the fins to a first surface of a membrane for heat transfer thereto.

25. The method according to claim 24 further comprising attaching further fins to a second surface of a membrane for heat transfer thereto.

26. The method according to claim 25 further comprising folding the membrane to form a tubular structure with the elongate fins on an exterior surface of the tubular structure and the further fins on an internal surface of the tubular structure.